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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,501	02/27/2007	Siegfried Kogelbauer	FRZ-112US	7010
23122	7590	12/04/2008		
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			EXAMINER JONAITIS, JUSTIN M	
			ART UNIT 4159	PAPER NUMBER
			MAIL DATE 12/04/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,501	Applicant(s) KOGELBAUER, SIEGFRIED	
	Examiner JUSTIN JONAITIS	Art Unit 4159	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) 13, 15 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14, 16, 18-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/02/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species III (Claims 1-12, 14, 16, & 18-20), in the reply filed on 11/07/2008 is acknowledged.
2. Claims 13, 15, and 17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/07/2008.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the Channel (KAN), Gas Channel (GKA), Inlet Funnel (ELT), Non-Return Valve RVC), Rounded Shoulders (SUL), Grooved Section (NUT), the recess in the flow rate limiter, and Outer Surface (AMA) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant

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will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, 6-10, 12, 14, 16, 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent #5,111,994 to Gonzalez.

6. In re claim 1, Gonzales discloses a **flow rate limiter (booster (14))** with a **flow body (body portion (16))** wherein the flow body is penetrated by at least one **channel (Chambers (20a) and (20b))** through which fluid can flow with an **inlet port (inlet of chambers)** and an **outlet port (outlet of chambers)** and is provided with at least one **gas channel (Air/Water Channel (23))** with a **gas intake (air input port (17))** and a **gas outlet port (channel (25))** for a gas to be mixed with the fluid emerging from the channel.

7. In re claim 2, Gonzales discloses the invention as described above including the inlet **funnel (funnel shaped input port (100))** having a curvature. Curvature being equal to $F(x) = C \cdot 1/x$ is a standard function of curvature and also an admitted prior art by applicant in order to induce an increased acceleration while promoting mixing.

8. In re claim 4, Gonzales discloses the invention as described above including the channel having a circular cylindrical design and is arranged axially in the flow body.

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9. In re claim 6, Gonzales discloses the invention as described above including the flow limiter having at least one **recess (Inner region (16a))** for receiving materials. Please note that the claims are directed to apparatus which must be distinguished from the prior art in term of structure rather function [MPEP 2144]. Hence, the functional limitations “magnetic, inorganic, or organic materials” which are narrative in form have not been given any patentable weight. In order to be given patentable weight, a functional recitation must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997)

10. In re claim 7, Gonzales discloses the invention as described above including a **mount (housing (10) and Flange (26))** for limiting flow rate with an inlet port (**Output port (41) of ball (12))** and an **outlet port (Ports (29), (18), and (5))** for a fluid, wherein the inlet port has a larger cross section than the outlet port, the flow rate limiter is arranged between the inlet port and the outlet port.

11. In re claim 8, Gonzales discloses the invention as described above including the gas intake of the flow rate limiter connecting in the mounted state in alignment with the gas intake channel. **[Figures 1-3]**

12. In re claim 9, Gonzales discloses the invention as described above including the channel for the fluid and the gas outlet port opening into a **mixing chamber (Mixing Chambers (20a) & (20b))** that is permeable in the flow direction. **[Figure 3, Column 2, Lines52-53]**

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13. In re claim 10, Gonzales discloses the invention as described above including the mixing chamber having a truncated cone-shaped cross section.

14. in re claim 12, Gonzales discloses the invention as described above including where the flow limiter has at least one **grooved section(threads (30))** on the outer surface.

15. In re claim 14, Gonzales discloses the invention as described above including the outer surface of the mount having a smooth design.

16. In re claim 16, Gonzales discloses the invention as described above including the **housing (housing (10))** having at least one **recess (chamber (101))** in the area of the outlet port for receiving material. Please note that the claims are directed to apparatus which must be distinguished from the prior art in term of structure rather function [MPEP 2144]. Hence, the functional limitations “magnetic, inorganic, or organic materials” which are narrative in form have not been given any patentable weight. In order to be given patentable weight, a functional recitation must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997)

17. In re claim 18, Gonzales discloses the invention as described above including the flow rate limiter for mixing water as the fluid and air as the gas.

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18. In re claim 19, Gonzales discloses a process for mixing at least one fluid with at least one gas wherein the flow rate of the fluid is reduced (at the inlet) and then increased (at the outlet) and the fluid is swirled and then mixed with the at least one gas.

19. In re claim 20, Gonzales discloses the process as described above where the water as the fluid and air as the gas are used.

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

22. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #5,111,994 to Gonzalez in view of U.S. Patent #6,076,748 to Resch et al.

23. Gonzales discloses the invention as described above but fails to disclose the channel and the gas outlet port opening into one plane. Resch et al. discloses a flow rate limiter which has an ozone outlet (gas outlet) and a water channel (passage (84)) which open into the same plane. It would have been obvious to one having ordinary skill in the art at the time the invention was made to change Gonzalez's gas outlet to open into the same plane since Resch et al.

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[Figure 3, Column 10, lines 21-28] show an equivalent flow pattern can be achieved when used in the art of flow limiting which mixes a gas and a liquid. The selection of either of these known elements for limiting flow and mixing a gas and liquid would be within the level of ordinary skill in the art.

24. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #5,111,994 to Gonzalez in view of U.S. Patent #6,283,329 to Bezaire et al.

25. Gonzales discloses the invention as described above but fails to include non return valves arranged in the gas channel. Bezaire et al. teaches it is known to use a ball check assembly to prevent the flow of fluid in the opposite direction by action of the ball with the ball seat. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a non-return ball valve as taught by Bezaire et al., since Bezaire et al. states in column 9 lines 35-37 that such a modification would prevent the flow of fluid in the opposite direction.

26. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #5,111,994 to Gonzalez in view of U.S. Patent #3,556,409 to Johannisson.

27. Gonzales discloses the invention as described above but does not disclose the mixing chamber having rounded shoulders. Johannisson teaches that it is known to have a mixing chamber with rounded shoulders with a corresponding curvature. It would have been obvious at the time the invention was made to have used rounded shoulders as taught by Johannisson, since Johannisson states at column 1, lines 47-51 that such a modification would change the fluid characteristics of the channel.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent #1,669,810 to Calpham discloses an oil burner which has a flow restrictor which is used in the mixing of a liquid and a gas. U.S. Patent #2,124,443 to Wotring discloses a flow restrictor which uses similar structure with the gas inlet located in a different position and mixing in a different way). U.S. Patent #3,366,337 to Brooks et al. discloses a sprayer mixing two fluids which incorporates a non-return valve. U.S. Patent #5,826,799 to Hsieh discloses a sprinkling head with a flow rate limiter which has gas which has a different style gas channel. .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN JONAITIS whose telephone number is (571)270-5150. The examiner can normally be reached on Monday - Friday 7:30am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on (571)272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJ

/Quang T Van/
Primary Examiner, Art Unit 3742

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